

**Potential Roost Tree Retention Guidelines for Endangered Bats Vermont Fish
and Wildlife Department
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Maintain or enhance known and potential roost trees: Forest management activities should maintain and/or enhance an adequate supply of known and current potential roost trees as prescribed below. These guidelines focus primarily on roosting preferences of the federally endangered Indiana bat and the federally threatened northern long-eared bat, but are beneficial to other state-listed species as well:

- Maintain all known roost trees within which bats have been observed or documented roosting and all trees within a 150-foot buffer.
- Maintain an adequate supply and diversity of current potential primary and alternate roost trees of various species exhibiting a combination of characteristics including sloughing bark, cavities, and crevices so that, in total, there exist:
 - 3 trees/acre less than 10 inches dbh (diameter at breast height)
 - 4 trees/acre between 10 and 18 inches dbh
 - 1 tree/acre greater than 18 inches dbh
- The number of current potential roost trees need not be distributed evenly throughout the parcel, but may be concentrated in areas having a slope, aspect, or position that enhances connectivity to suitable foraging habitat. When concentrations of large diameter, high quality current potential roost trees are enhanced through management (e.g., girdling), then compromises in the average number of current potential roost trees in other stands in the parcel can be adjusted downward where other forest management goals may be emphasized.
- If adequate roost tree numbers are not available, then a proportion (2–3/acre) of select cull trees (i.e., greater than 10 inches dbh) should be girdled to more quickly become current potential roost trees. If preferred, these densities can be concentrated on a limited acreage as described above.
- Maintain connectivity to adjacent habitat and concentrate conserved trees to create proximity of roosting opportunities. Preclude openings (e.g., patch cuts) that result in clusters of potential roost trees or any potential roost tree greater than 18 inches dbh out in the open (greater than 20 feet from canopy cover).
- Maintain a supply of large diameter cull trees for long-term retention to serve as **future** potential roost trees, prioritizing for larger trees that are more dominant in the canopy.
- Maintain current stand conditions within 150 feet of known roost trees, unless careful removal of adjacent tree(s) shading the known roost tree can be conducted without damaging the roost tree`

Within Indiana bat range, the following additional measures should be applied to maintain adequate roosts for both species:

- Maintain all black locust trees greater than 8 inches dbh and all shagbark hickory trees (unless thinning is prescribed to maintain vigor of shagbark hickories) .
- “Daylight” or create openings (on as many as 3 sides) adjacent to a portion of the larger current potential roost trees, particularly live shagbark hickory trees greater than 12 inches dbh and trees that have a slope, aspect, or position (i.e., forest edge) that enhances solar radiation. Leave adequate canopy cover within 20 feet for bats to emerge into forest cover. Removal of adjacent trees shading some live shagbark hickory trees may be very effective in increasing solar radiation for many years.